



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,667	12/13/2001	Tao Hong	VAL 100 P2	7810

7590 11/14/2002

JACOX, MECKSTROTH & JENKINS  
2310 FAR HILLS BUILDING  
DAYTON, OH 45419-1575

[REDACTED] EXAMINER

NGUYEN, HANH N

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2834

DATE MAILED: 11/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/017,667	HONG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Nguyen N Hanh	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_ .
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 December 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_ .
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                     | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . | 6) <input type="checkbox"/> Other: ____ .                                   |

## DETAILED ACTION

### ***Claim Objections***

1. Claim 7 is objected to because of the following informalities: "wherein said at least two fins are generally parallel to each other" should be written as "wherein in said plurality of fins, at least two fins are generally parallel to each other". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-23 and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by Autret et al.

Regarding claim 1, Autret et al. disclose an electric motor or alternator comprising: a stator comprising pairs of magnets or coils for providing an electromagnetic field; a rotor mounted on an armature shaft and rotatably positioned in said stator, said rotor comprising a commutator positioned on an armature shaft (inherent because it is well known in the art that a motor or generator always includes these features); a brush holder plate (2 in Fig. 7) positioned around said commutator and comprising a plurality of brush boxes (4 and 6) each capable of receiving at least one brush (48); and said brush box comprising a heat sink (Col. 4, line 7) for dissipating heat generated by said brushes to lower a brush temperature.

Regarding claim 2, Autret et al. also disclose an electric motor or alternator wherein said heat sink comprises at least one fin (36) situated on said brush box.

Regarding claim 3, Autret et al. also disclose an electric motor or alternator wherein said heat sink comprises a plurality of fins situated on at least one of said plurality of brush boxes (Fig. 7).

Regarding claim 4, Autret et al. also disclose an electric motor or alternator wherein said plurality of fins comprises at least two fins (Fig. 7).

Regarding claim 5, Autret et al. also disclose an electric motor or alternator wherein said plurality of brush boxes comprise a plurality of fins (36) integrally formed (integrally formed with base 32), separately mounted (Fig. 4) or otherwise associated with said brush box with a good thermal connection.

Regarding claim 6, Autret et al. also disclose an electric motor or alternator wherein said plurality of brush boxes and said heat sink is copper (Col. 2, lines 38-41), aluminum or other materials with high thermal conductivity.

Regarding claim 7, Autret et al. also disclose an electric motor or alternator wherein in said plurality of fins, at least two fins are generally parallel to each other (Fig. 4).

Regarding claim 8, Autret et al. also disclose an electric motor or alternator wherein at least one of said at least two fins are non-planar (not lying in the same plane).

Regarding claim 9, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 1.

Regarding claim 10, it is noted that the method as claimed has been fulfilled by Autret et al. in claim 2.

Regarding claim 11, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 3.

Regarding claim 12, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 4.

Regarding claim 13, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 5.

Regarding claim 14, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 6.

Regarding claim 15, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 7.

Regarding claim 16, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 8.

Regarding claim 17, Autret et al. also disclose a brush retainer comprising: a brush holder plate (50 in Fig. 7) having an aperture (52) therethrough for receiving a commutator, said brush holder further comprising a plurality of brush boxes (4 and 6) each having at least one brush (8) therein for contacting said commutator (not shown) when said commutator is positioned in said aperture; and said brush holder comprising a heat sink (Col. 4, line 8).

Regarding claim 18, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 2.

Regarding claim 19, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 3.

Regarding claim 20, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 4.

Regarding claim 21, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 5.

Regarding claim 22, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 7.

Regarding claim 23, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 6.

Regarding claim 25, it is noted that all limitations of the claimed invention have been fulfilled by Autret et al. in claim 8.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Autret et al.

Regarding claim 24, Autret et al. show all limitations of the claimed invention except showing the brush retainer wherein said brushes comprise a brush temperature without said heat sink and a second brush temperature with said heat sink, said second

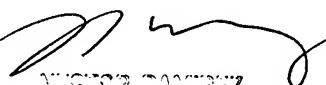
brush temperature being at least 9.7 degrees Celsius lower than said brush temperature. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the brush retainer wherein said brushes comprise a brush temperature without said heat sink and a second brush temperature with said heat sink, said second brush temperature being at least 9.7 degrees Celsius lower than said brush temperature, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703) 305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner 's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

  
Hanh N. Nguyen  
SAC - INTERVIEW & INFORMATION  
10/04/2002

HNN

October 4, 2002